



WESTERN GOVERNORS' ASSOCIATION

Biomass as Part of the WGA Clean and Diversified Energy Initiative

Montana Communities and Wildfire Conference

March 1, 2006

Bill Carlson and John Stewart
WGA Biomass Task Force

Clean and Diversified Energy Initiative

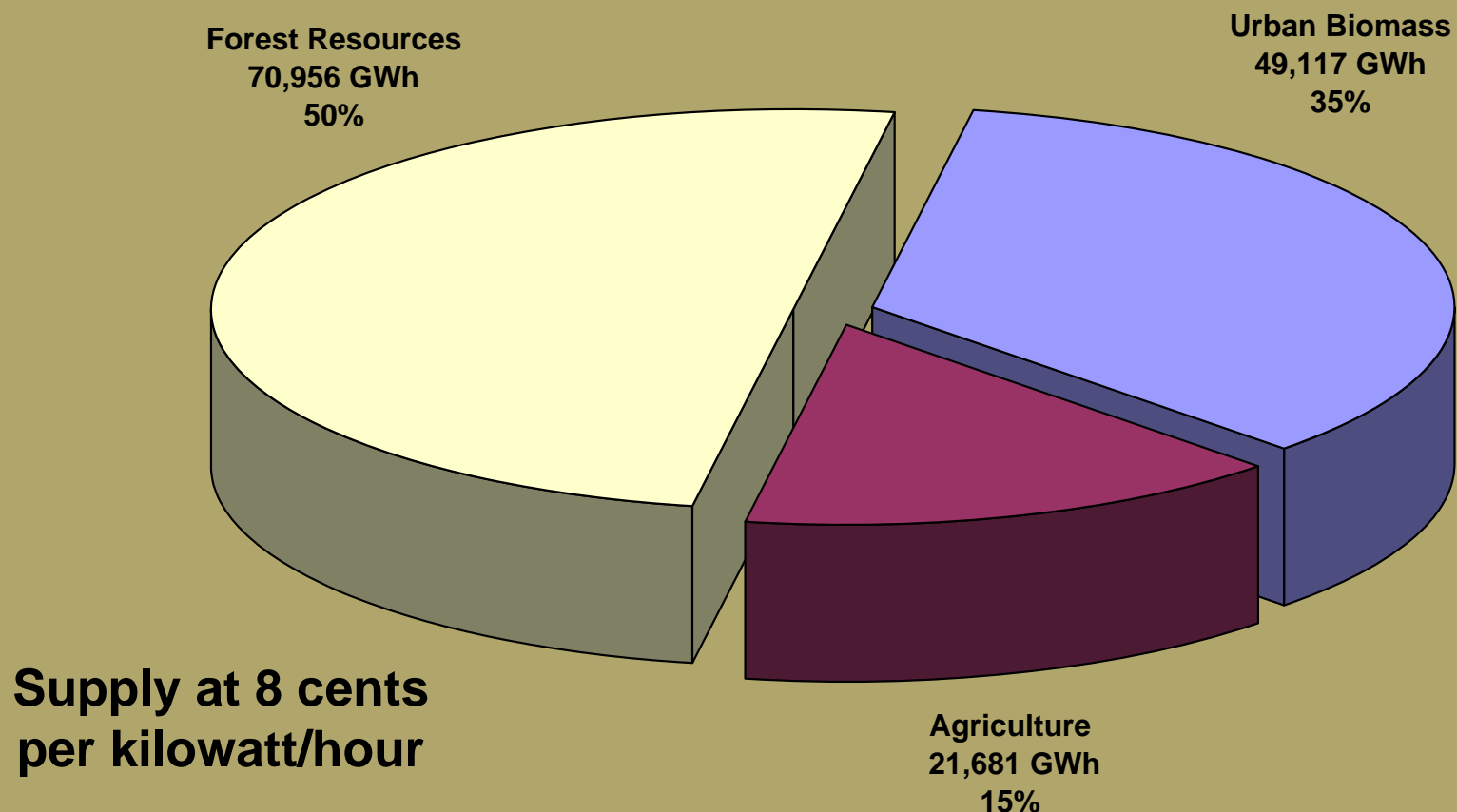


- **Western Governors' Goals**
 1. Add 30,000 megawatts of clean energy by 2015
 2. Increase energy efficiency 20% by 2020
 3. Providing adequate transmission for the region
- **Clean and Diversified Energy Advisory Committee (CDEAC) Formed to Provide Recommendations to Attain these Goals; Task Forces:** Advanced coal, Advanced natural gas, Biomass, Energy Efficiency, Geothermal, Solar, Wind, Transmission
White papers: CHP and Hydropower

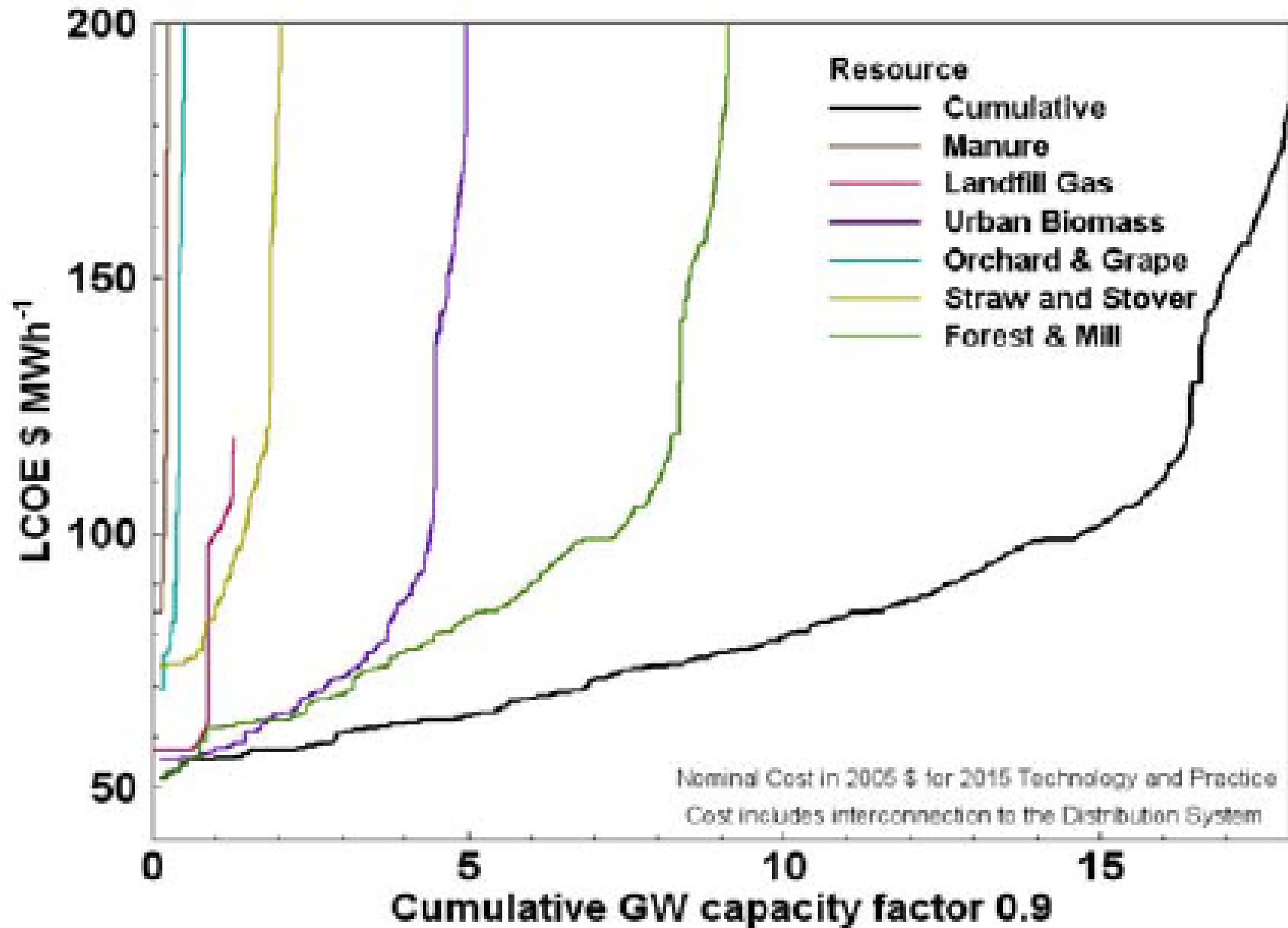
Clean and Diversified Energy Initiative



Biomass in the WGA Region Available for Power Generation



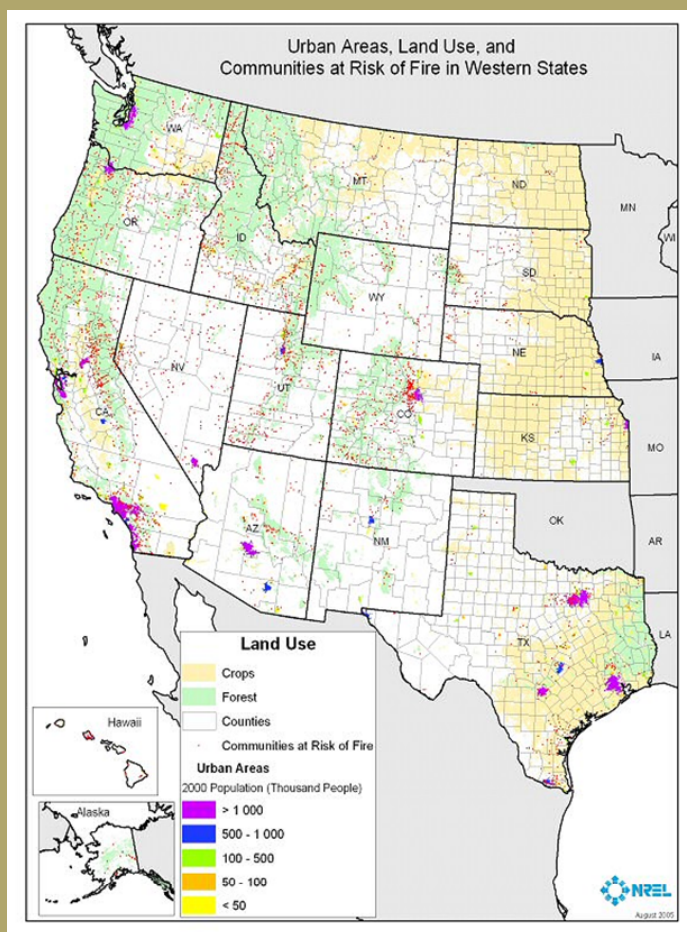
WGA - Biomass Supply



Clean and Diversified Energy Initiative



Ancillary Benefits of Biomass Energy Production

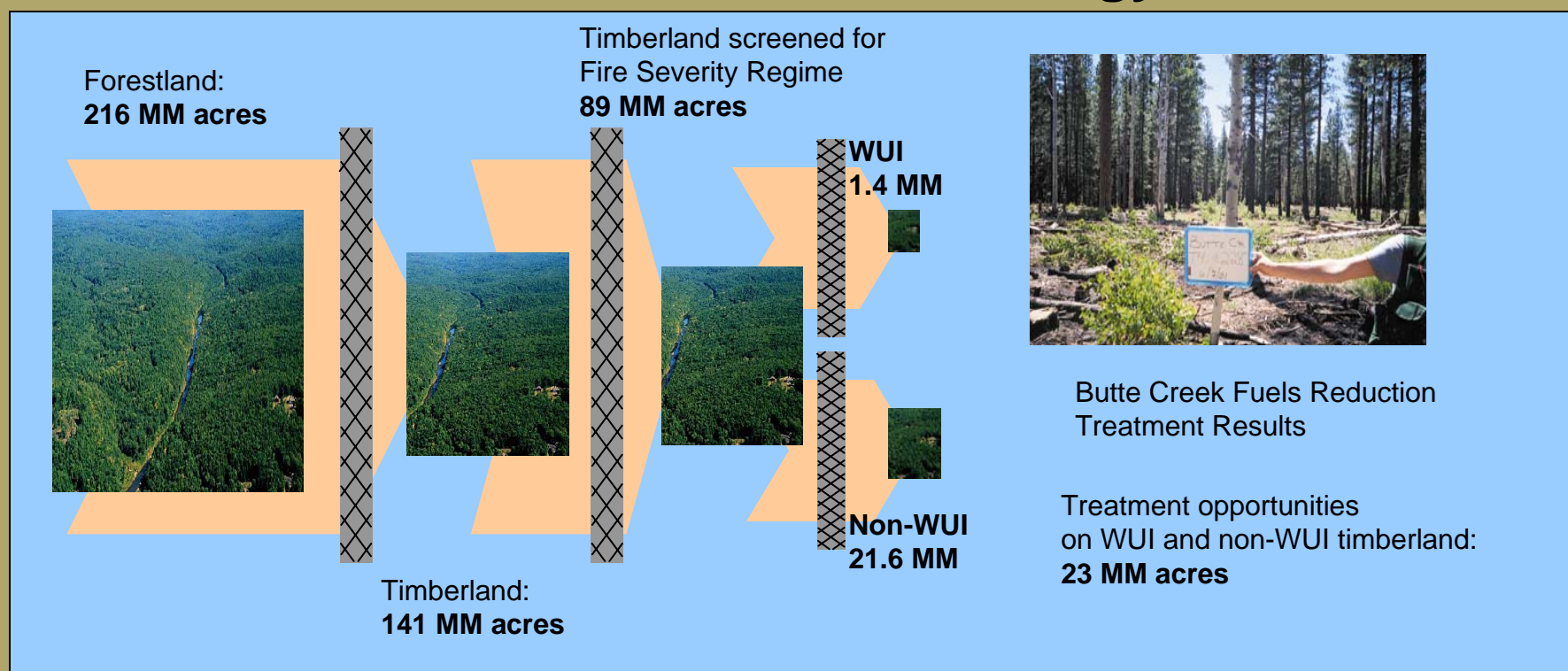


- Synergies of restoration
- Fire Risk Reduction
- Rural Economic Growth And Preservation
- Distributed Resources
- Productive Use of Byproducts rather than disposal
- Clean air and less smoke

Clean and Diversified Energy Initiative



Fire Risk Reduction Strategy



Fire Severity Regime Screens:

1. Forest type with a surface or mixed severity fire regimes
2. For WUI added limited treatment of high severity fire regimes

Final Screens:

1. Plots with higher fire hazard ($CI < 25$ mph or $CI < 40 + TI < 25$)
2. Inventoried roadless areas excluded
3. Counties with wetter climates excluded



Biomass Opportunities for Montana

John C. Stewart
Office of Wildland Fire Coordination
Department of Interior
March 1, 2006

Forest Health and Wildfire Threats

Ashurst Valley, Eagle Lake Ranger District, Lassen National Forest





JUN 28 2000
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**Cone Fire
Blacks Mountain Exp Forest
September 2002**



Unthinned

Thinned

1 2 3 4

1

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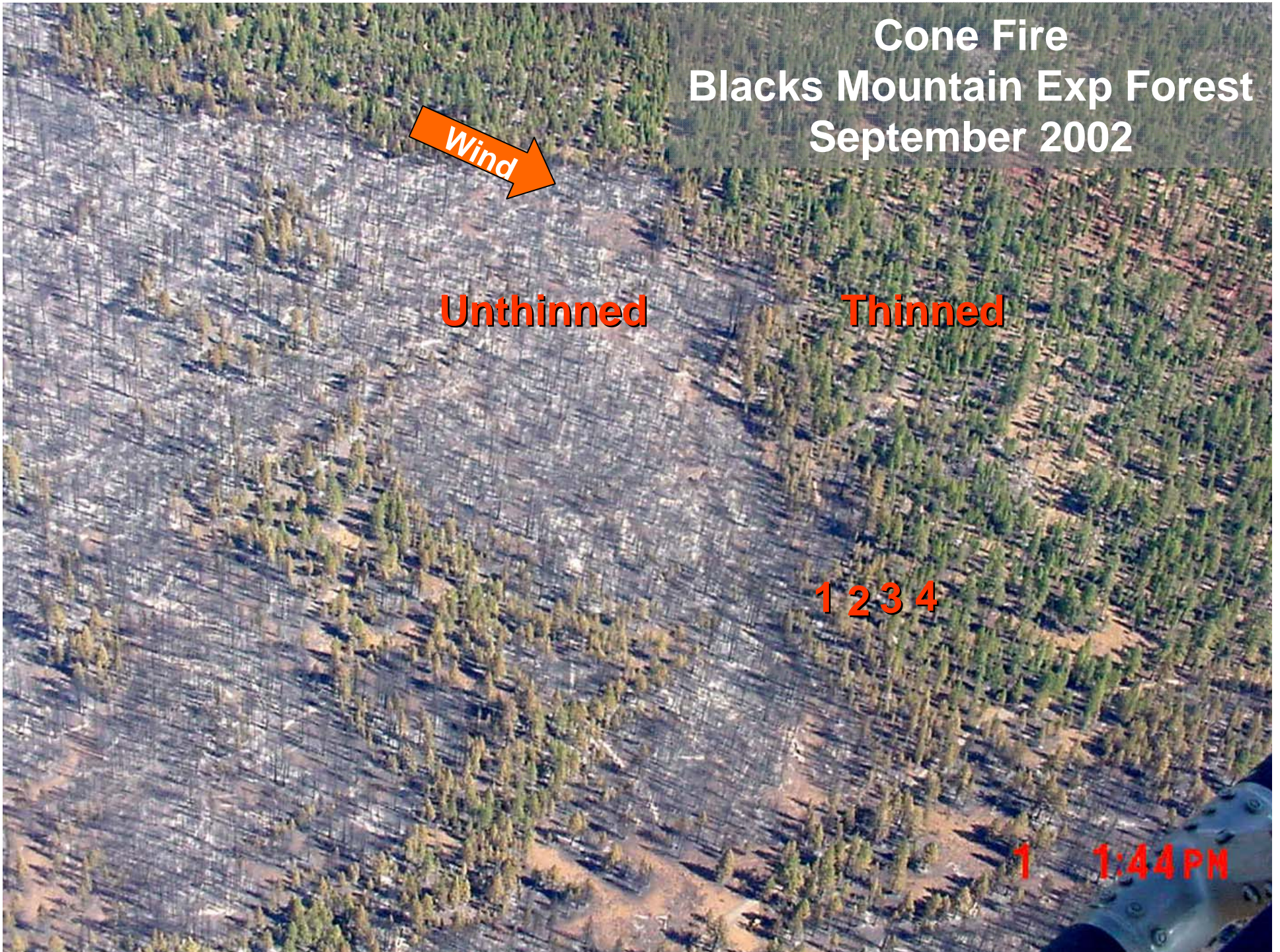




Photo 1
Unthinned

a



a

b

**Photo 2
Thinned**





Photo 4
Thinned

Thinned to Protect California Spotted Owl



Before



After



Thinned to Improve Aspen for Wildlife



Before



After



Thinned to Reduce Hazardous Fuels



Before



After



Biomass Success Story

Northern California

- ✓ 30+ projects totaling over 18,000 acres sold in last 10 years
- ✓ Average return of \$146.65 per acre, with range of \$6 to \$648
- ✓ Average project size of 630 acres, with range of 73 to 1,671
- ✓ Another 10,000 acres were treated through contracts to establish a market
- ✓ Averaging 3,000 acres per year

Biomass Success Story

Northern California

- ✓ The first 15 years of biomass thinning were service contracts to establish a local market
- ✓ Consistent, reliable supply of biomass fuels allowed for amortization of private investment
- ✓ California has a Renewable Energy Standard which helped establish the biomass industry
- ✓ Contracts were not restrictive and their administration was cooperative and not punitive, focusing on the end result
- ✓ Small sawlogs (less than 16") were included

Key Points

- Consistent, reliable supply of wood fiber
- Focus on results, not products
- Involve Constituents, including Industry
- Be patient in developing small wood and biomass markets

**Whether you think you,
or think you can't,
you are right**

Henry Ford

